Invitation for Public Comment on the List of Candidates for the EPA Science Advisory Board Drinking Water Committee Augmented for the Review of Partial Lead Service Line Replacement Effectiveness

February 3, 2011

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a *Federal Register* Notice (Volume 75, Number 244, Pages 80050-80051) published on December 21, 2010 that it was augmenting the Drinking Water Committee (DWC) to review and provide independent expert advice, through the Chartered SAB, on recent studies examining the effectiveness of partial lead service line replacements. To augment the DWC, the SAB Staff Office sought public nominations of recognized experts with demonstrated expertise and research in one or more of the following areas related to lead: environmental engineering, drinking water exposure assessment, epidemiology, statistics, and risk assessment.

Based on the qualifications and interest of the nominees, the SAB Staff Office identified candidates to augment the DWC for this review. The biosketches of these candidates are provided below. Biosketches of the members of the DWC are available at: http://yosemite.epa.gov/sab/sabpeople.nsf/WebCommitteesSubcommittees/Drinking%20Water%20Committee

The SAB Staff Office Director will make the final decision about who will serve on the Panel based on all relevant information. This includes a review of the confidential disclosure form (EPA Form 3110-48), relevant information gathered by staff, and public comments. For the EPA SAB Staff Office, a balanced Panel is characterized by inclusion of candidates who possess the necessary domains of knowledge, the relevant scientific perspectives (which, among other factors, can be influenced by work history and affiliation), and the collective breadth of experience to adequately address the general charge. Specific criteria to be used in evaluating a candidate include: a) scientific and/or technical expertise, knowledge, and experience; b) availability and willingness to serve; c) absence of financial conflicts of interest; d) absence of appearance of a lack of impartiality; e) skills working in advisory committees and panels; and, for the panel as a whole, f) diversity of scientific expertise and viewpoints.

We hereby invite comments from members of the public to provide relevant information of other documentation that the SAB Staff Office should consider in determining who should serve on the Drinking Water Committee Augmented for the Review of Partial Lead Service Line Replacement Effectiveness. Please be advised that comments received are subject to release under the Freedom of Information Act. Comments should be submitted to Mr. Aaron Yeow, Designated Federal Officer, no later than February 24, 2011. E-mailing comments (yeow.aaron@epa.gov) is the preferred mode of receipt.

BioSketch

Candidates to Augment the Drinking Water Committee for the Partial Lead Service Line Replacement Effectiveness Review

Baumann,Frank

Retired from the California Department of Health Services

Frank Baumann is the retired Chief of the Sanitation and Radiation Laboratories Branch in the Division of Drinking Water and Environmental Management, Department of Health Services, of the State of California, (now the Drinking Water and Radiation Laboratories of the Department of Public Health), where he directed two laboratories (Berkeley and Los Angeles), with a total staff of 60+ scientists and technicians. The Branch is responsible for providing analytical and consultative support for the State's Drinking Water, Wastewater and Radiation Safety programs of the Department, and interfaces closely as a technical resource to legislative bodies and regulatory agencies. One of the laboratories' responsibilities is research into and the development of analytical methods to permit public and private laboratories to achieve the detection limits required for many trace contaminants. Under Mr. Baumann's direction the laboratories developed and published sensitive methods for the determination of sub parts per billion levels of many contaminants, among them perchlorate, purgeable organics and nitrosamines. Mr. Baumann qualified in Analytical and Process Chemistry in Austria (1952) and shortly thereafter emigrated to Canada where he spent two years in the Yukon Territory assaying ores for gold, silver and lead content. In 1957 he was offered a position with the then premier commercial testing laboratory in Los Angeles, where he specialized in air pollution studies. In 1961 he joined Pomeroy and Associates, where he worked for 18 years under the tutelage of Dr. Richard Pomeroy, the dean of corrosion control in wastewater systems. By 1973 Baumann was appointed to the directorship of the laboratory and shortly thereafter the firm was acquired by Jacobs Engineering Co. Finding himself "a mere chemist" in a large firm of engineers, Baumann returned to school and obtained a Master's degree in Environmental Engineering from Loyola Marymount University. He is a Registered Corrosion Engineer, Grade V Water Treatment Operator, and has a Lifetime College Teaching Credential (all CA) for Water and Wastewater Treatment and Engineering. In that capacity he taught the subjects for 23 years at Citrus College, Glendora, CA. Mr. Baumann has been a member of the American Chemical Society, California Water Pollution Control Federation, National Association of Corrosion Engineers and the American Water Works Association. He is the recipient of the "Public Service in Chemistry" award, presented by the Orange County (CA) Section of the American Chemical Society (1997). Baumann was a consultant to the National Research Council, NAS, on the development of the Water Chemical Codex; he was a member of the Blue Ribbon Editorial panel to Oak Ridge National Laboratory, developing the "Corrosion Manual for Internal Corrosion of Water Distribution Systems", and was Water Treatment Consultant to NASA, Jet Propulsion Laboratory, CA. Baumann was Part Coordinator for Part 6000 (Organics) for the 15th through 18th editions of "Standard Methods for the Examination of Water and Wastewater". Among his fifteen publications is "Dichromate Reflux Chemical Oxugen Demand for Chloride Correction in Highly Saline Waters", Analytical Chemistry, 1974. In his retirement Mr. Baumann has remained active consulting on water treatment for corrosion prevention and control for the State of California and private clients. He is not currently pursuing any research, and all past research was internally (State) funded.

Cardew,Peter

United Utilities

Dr. Peter Cardew is a Network Technical Specialist working with the Water Asset Management : Policy & Strategy Team of United Utilities. United Utilities serves seven million customers in the North West of England. The water distribution system comprises 40,000 kilometers of mains and many of these date back to the early 20th century. Many service lines are of lead and Peter has been providing technical leadership in the business in developing and implementing lead control strategies. Peter has undertaken considerable research as identified in his CV into lead performance in water distribution systems and has investigated some of the practical measures that can be taken to reduce exposure to lead. A seasoned professional, Peter enjoys an international reputation as a respected authority on drinking water research.

Edwards,Marc

Virginia Polytechnic Institute and State University (Virginia Tech)

Marc Edwards is currently the Charles Lunsford Professor of Civil Engineering at Virginia Polytechnic Institute and State University (Virginia Tech), where he teaches courses in environmental engineering and applied aquatic chemistry. His awards include a Presidential Faculty Fellowship from the White House in 1996, Outstanding Science Paper awards from 3 different journals, a Walter Huber Research Prize from the American Society of Civil Engineers, State of Virginia Outstanding Faculty Award, a MacArthur Fellowship (2008-2012), the 2010 Praxis Award in Professional Ethics from Villanova University.

Hayes,Colin

Swansea University

Dr Colin Hayes is currently Chairman of the International Water Association's (IWA) Specialist Group on Metals and Related Substances in Drinking Water and an Honorary Lecturer in the College of Engineering at Swansea University (UK). He was Editor of the IWA Best Practice Guide on the Control of Lead in Drinking Water (2010), which contains several case studies involving partial lead service line replacement. His PhD was awarded for research into the simulation of lead emissions to drinking water and the development and application of computational methods for optimizing plumbosolvency control. A major focus of his research has been to investigate the characteristics of the sampling methods that are used to monitor lead in drinking water. This is very pertinent to the review of the effectiveness of partial lead service line replacements as it will be highly sensitive to the sampling methods used. He has served on numerous technical committees during a water sector career spanning 35 years.

Heard,Nina

Syngenta Crop Protection, LLC

Dr. Heard is currently a professional chemical manager with more than twenty years of experience in various roles within agrichemical research and development. In the past twenty years with Syngenta Crop Protection, an international leader in agricultural chemistry, Dr. Heard has functioned as a laboratory synthesis chemist and manager, a technical expert in conducting internal andexternal residue studies, a product safety team lead for the Americas and as a Science and Technology Fellow in product safety research and development. Dr. Heard's current responsibilities include continuous interaction internally with colleagues in sales and marketing, regulatory affairs, formulations, project planning and technical brand management. This interaction involves translating and advocating technical information and positions in support of both new product registration and product life cycle management. Externally, Dr. Heard has significant experience in advocating technical positions with regulatory authorities (US EPA and USDA) as well as in the promotion of new methodologies in the area of product safety research and development. As one of forty-four Syngenta Fellows worldwide, Dr. Heard also serves as a technical expert in the area of product safety risk assessment. This role involves technology foresight (scouting) and ascertaining the value of new technologies to the company as well as mentoring junior scientists and promotion/coordination of external research opportunities with academic institutions. Over the past eight years, Dr. Heard's role has been global in scope and I have worked on numerous projects involving close collaboration with technical and regulatory colleagues in the EU (predominantly Switzerland and the UK), Latin America (predominantly Brazil) as well as with Mexico and Canada. I have served on several European task forces in addition to US-based agrichemical industry task forces (US Triazole Task Force, Joint Inerts Task Force, CLA Pyrethroid Working Group, and the CLA Dietary Assessment Working Group).

Hu,Howard

University of Michigan

Dr. Hu is a physician board-certified in internal medicine and occupational/environmental medicine who also holds a doctoral degree in epidemiology. He came to the Univeristy of Michigan School of Public Health from the Harvard School of Public Health and the Channing Laboratory of the Brigham and Women's Hospital in 2006, where he had directed the Harvard Residency Program in Occupational and Environmental Medicine, the Harvard Metals Epidemiology Research Group, and the Center for Children's Environmental Health and Disease Prevention Research. At Michigan, Dr. Hu has continued his research collaborations on metals through what has evolved into the Michigan-Harvard Metals Epidemiology Research Group, which is engaged in multiple NIH- and EPA-funded epidemiologic investigations of the contribution of exposure to metals (and other pollutants), genetics, and gene-environment interactions to the causation of chronic diseases in adults and impaired development in children. Amongst the most important on-going investigations are the Early Life Exposure in Mexico to ENvironmental Toxicants (ELEMENT) project, a 16 year old series of birth cohort studies conducted in collaboration with the Instituto Nacional de Salud Public (National Institute of Public Health) in Mexico, as well as new studies of environmental risk factors, epigenomics, and Alzheimer's disease conducted in collaboration with the Michigan Alzheimer's Disease Coordinating Center. Dr. Hu's research interests also encompass clinical syndromes such as idiopathic environmental intolerances (chemical sensitivities) and emerging children's environmental health issues such as neonatal exposure to phthalates. He served on 3 fact-finding missions and on the board of directors for Physicians for Human Rights and in 1992-1995 was the Chair of the Commission for Research on the Health and Environmental Effects of Nuclear Weapons Production and Testing for the International Physicians for the Prevention of Nuclear War (IPPNW; Nobel Peace Prize, 1985). He has authored or co-authored over 270 scientific papers and book chapters and co-edited or co-authored 7 books. Dr. Hu was the founding medical editor (and continues as one of the Associate Editors) of Environmental Health Perspectives, the journal of the National Institute of Environmental Health Sciences. Among the awards and honors Dr. Hu has received have been the 1994 Will Solimene Award of Excellence, American Medical Writers Association, the 1997 Alice Hamilton Lectureship at the University of California at San Francisco, the 1998 First Prize for Best Infant Nutrition Research from the Instituto Danone of Mexico, the 1999 NIEHS Scientific Advance of the Year, the 2000 Hoopes prize for mentorship of environmental research, a Senior United States Faculty Fulbright Award to work as a scholar in India 2000-2001, the 2005 Adolph Kammer award for authorship by the American College of Occupational and Environmental Medicine, the 2006 Harriett Hardy award from the New England College of Occupational and Environmental Medicine, and the 2009 Linus Pauling award for lifetime achievement from the American College for the Advancement of Medicine.

Kosnett,Michael

University of Colorado Health Sciences Center

Dr. Kosnett is a medical toxicologist with a clinical and research interest in the toxicology of lead and other heavy metals. Dr. Kosnett received his B.S. degree in Molecular Biophysics & Biochemistry from Yale University in 1979, his M.D. degree from the University of California, San Francisco in 1983, and his M.P.H. degree in Environmental Health Sciences from the University of California, Berkeley, in 1988. Dr. Kosnett is a Diplomate of the American Board of Internal Medicine, the American Board of Medical Toxicology, and the American Board of Preventive Medicine (Occupational Medicine). He is an Associate Clinical Professor in the Division of Clinical Pharmacology and Toxicology at the University of Colorado Health Sciences Center, and an Attending Physician at the Rocky Mountain Poison and Drug Center. Dr. Kosnett currently serves as the Chair of the Work Group on Lead in Consumer Products of the CDC Advisory Committee on Childhood Lead Poisoning Prevention. He is Past-President of the American College of Medical Toxicology (2002-2004), the national organization of physicians specializing in the field of medical toxicology. In 2005, he completed three years of service on the National Institute for Occupational Safety and Health (NIOSH) - funded Expert Panel on Medical Management Guidelines for Lead Exposed Adults convened by the Association of Occupational and Environmental Clinics. He is a past member of the Committee on Toxicology of the National Research Council, and of the US EPA Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) Scientific Advisory Panel on Copper-Chromated-Arsenic Treated Wood. He has served on the Subcommittee on Arsenic in Drinking Water of the National Research Council (1999 and 2001 reports). He is currently a member of the World Health Organization's Antidote Monograph Peer Review Committee, and he has been a Temporary Advisor to the World Health Organization regarding human arsenic exposure from drinking water in India and SE Asia. Between 1997 to 2000, Dr. Kosnett served on four expert workshop panels convened by the Agency for Toxic Substances and Disease Registry (ATSDR) to develop recommendations on medical monitoring for residents impacted by the Bunker Hill, Idaho Superfund Site, the largest lead-contaminated site in the United States. Dr. Kosnett has been a recent consultant to the CDC's National Center for Environmental Health on selected sections on metals (including lead) contained within the Second and Third National Report on Human Exposure to Environmental Chemicals. In 2003, Dr. Kosnett was recipient of the Assistant Administrator's Award for Special Service to the Agency for Toxic Substances and Disease Registry. Dr. Kosnett has conducted research and authored several papers and book chapters on the clinical toxicology of human lead exposure, including the use of noninvasive K x-ray fluorescence as a biomarker of cumulative lead exposure. He has served as a clinical consultant to the Occupational Lead Poisoning Prevention Program of the California Department of Health Services for more than 15 years, and also serves as an advisor on childhood lead screening and prevention for the Colorado Department of Public Health and Environment. In Denver, Dr. Kosnett was an EPA funded Technical Advisor to a community group regarding the VB/I-70 Superfund site, a large residential area impacted by arsenic and lead in residential soil, and he was a technical consultant to the ATSDR funded "Kids At Play" study of childhood pica behavior conducted in that venue.

Lanphear,Bruce

Simon Fraser University

Bruce P. Lanphear, MD, MPH, is a Professor of Children's Environmental Health at Simon Fraser University and a Senior Scientist at the Child & Family Research Institute, BC Children's Hospital, both in Vancouver, British Columbia. He received his Medical Degree from the University of Missouri at Kansas City and his Masters in Public Health from the Tulane School of Public Health & Tropical Medicine. He completed a residency in Preventive Medicine and Public Health at Tulane University and is board certified in Preventive Medicine and Public Health. Dr. Lanphear completed a 3-year NIH-funded postdoctoral training program in pediatric research at the University of Rochester School of Medicine. He has conducted numerous epidemiologic studies and several randomized controlled trials to reduce children's exposure to environmental hazards, including those implicating low-level lead exposure as a risk factor for intellectual deficits and behavioral problems in children. Dr. Lanphear also conducted several studies examining the relationship of lead-contaminated house dust with children's blood lead levels. Dr. Lanphear is currently the principal investigator for an NIH-funded study to examine the associations of prenatal and early childhood exposures to prevalent environmental neurotoxicants, including lead, pesticides, mercury, PCBs, and environmental tobacco smoke with the development of learning and behavioral problems. He has served on the Children's Environmental Health Expert Advisory Panel of the Commission on Environmental Cooperation (2000-2003) and as a member of the US EPA's Clean Air Scientific Advisory Committee on Lead Review Panel (2006-2008).

Rothenberg,Stephen

National Institute of Public Health

Dr. Stephen J. Rothenberg earned his PhD in Psychology with a thesis on the neurophysiology of the auditory nervous system. During his years of graduate study he published the first study of the origin of brainstem auditory evoked response and used them to determine threshold frequency audiograms. He held post-doctoral fellowships at the New York Medical College and at the then Czechoslovak Academy of Science studying neurophysiology. He was instructor first at Boston University School of Medicine and then held the same post and received promotion to Assistant Professor in the Harvard Medical School, concentrating his research on the pharmacology of opiates and benzodiazapines where he was principal investigator of R01 NIDA grants. He moved his laboratory to Mexico where was Chief of the Neuropharmacology Department. He simultaneously obtained funding from national and international sources, including the EPA, to start the Mexico City Prospective Lead Study, one of seven prospective lead studies opened during that period in the world, with the principal aim of studying developmental effects of prenatal and postnatal lead exposure. The study continues 25 years after its inception. He has been performing epidemiological and toxicological research since the mid-1980's, concentrating on studies sourcing lead and other heavy metal exposure in populations, describing developmental effects of lead and pesticides in humans, and the effects of heavy metals on cardiovascular function. Since 1996 he has held a post as senior researcher at the National Institute of Public Health in Mexico. During his years in Mexico he held joint appointments at the Harvard Medical School, the University of California-Irvine, the Charles R. Drew University of Medicine and Science in Los Angeles and the Center for Research and Advanced Studies (CINVESTAV), first in Merida, Yucatan, then in Mexico City. At Drew he was principal investigator of ATSDR cooperative agreements to investigate lead and hypertension in pregnant women and principal investigator of a NIEHS R01 grant studying the effects of retained bullets on body burden of lead. He was also director of the Toxicology Laboratory, supervising blood and bone lead measurements. Approximately half of his 100 journal articles to date are in fields related to environmental health and toxicology. He served on national Mexican occupational and population lead exposure and permissible limits of lead in ceramic ware committees. He served as the author of Chapter 6.5 Cardiovascular Effects of Lead. In: Air Quality Criteria for Lead. National Center for Environmental Assessment-RTP Division, Office of Research and Development, U.S. Environmental Protection Agency published in 2006. He currently serves as Lead Scientist for the U.S. EPA's Air Quality Integrated Science Assessment for Lead-Cardiovascular of Effects of Lead-Epidemiology Studies. His special interests and expertise include statistical design and modeling issues in epidemiology and he is active in promoting uniform standards for model diagnostic reporting in epidemiological studies impacting regulation.

Undesser,Pauli

Water Quality Association

Pauli Undesser maintains the title of Toxicology Manager for the Water Quality Association (WQA) Gold Seal Product Certification Program in addition to Director of Regulatory and Technical Affairs for WQA, which is a not-for-profit trade association representing the interests of the water treatment industry. As Toxicology Manager, Pauli developed the Toxicology department within WQA to streamline toxicology reviews for the Gold Seal Certification Program. As a director, Pauli provides regulatory and technical support to the drinking water treatment industry. She holds an MS degree in Biochemistry from Northern Illinois University and a BS degree in Chemistry from the University of Illinois – Urbana/Champaign. Her undergraduate, graduate, and post graduate research encompassed 11 years of applied laboratory work ranging from wet chemistry and organic chemistry to molecular biology and manipulations to chick embryo. Undergraduate research focused on ground water contamination from swine lagoons. The direction of graduate research was related to the preparation of sterioselective antibody single chain variable fragments for the separation of enantiomers. Lastly, post graduate research involved the review of limb regeneration in chick embryo. Currently, Pauli is not directly involved with academic research and has not participated in funded research for 7+ years. Since her days in academic research and joining WQA, Pauli Undesser has served on 2 expert panels for the Metals Coalition regarding the low lead regulation in California, AB 1953. The expertise provided was in the area of law interpretation for third party product certification to attain low lead compliance. She has also participated in the task force to develop an NSF/ANSI standard for low lead compliance through third party certification. Furthermore, Pauli has provided external support for several committees through EPA and ICC. Overall, her main interests lie in public health and safety through the provision of quality water.

Weaver,Virginia

Johns Hopkins University

Dr. Weaver is an Associate Professor of Environmental Health Sciences and Medicine and Director of the Occupational and Environmental Medicine Residency at the Johns Hopkins University. She is an Associate Faculty Member in the Welch Center for Prevention, Epidemiology and Clinical Research. She has a B.A. in Biology from the University of Rochester, an M.D. from New York University and an M.P.H. from the Johns Hopkins Bloomberg School of Public Health. She has been on the faculty at Johns Hopkins since completing her occupational medicine residency and post-doctoral research fellowship in 1993. Her research utilizes molecular epidemiology techniques to evaluate populations with exposure to occupational and environmental nephrotoxicants, including lead, cadmium and other metals. Research goals include improved risk assessment, medical surveillance, and exposure management (including treatment). Validation of exposure and early biological kidney effect markers is a focus as well as is assessment of effect modification by age, genetic susceptibility factors, and co-exposures on relations between those toxicants and kidney function. Dr. Weaver was a co-author for the kidney epidemiology section of the Environmental Protection Agency's Air Quality Criteria Document for Lead in 2006 and is contributing to the current Integrated Scientific Assessment. She has served on national research review and advisory panels for the Environmental Protection Agency and the National Institute of Environmental Health Sciences.

Wright,Robert

Harvard School of Public Health

Dr. Robert Wright is a pediatrician and environmental scientist at Children's Hospital, Boston and Harvard School of Public Health(HSPH). He completed post-doctoral training in epidemiology, genetics and medical toxicology. He is one of fewer than 50 Pediatricians board certified in Medical Toxicology. Dr Wright currently serves as the section editor for Toxicology for Current Opinion in Pediatrics. He is the Principal Investigator of 2 ongoing birth cohorts funded by the Environmental Protection Agency and the National Institute of Environmental Health Sciences- the (Metals Assessment Targeting Community Health) MATCH study in Tar Creek, Oklahoma, and a newly funded birth cohort in Mexico City (Early Life Exposure in Mexico to Environmental Toxicants-ELEMENT project) in collaboration with the National Institute of Public Health, Mexico. These cohorts address the roles of metals, social stressors and genetic susceptibility to metals in neurodevelopment. He is on faculty at both Harvard Medical School and Harvard School of Public Health, where he directs the graduate course in Toxicology (EH504, cross referenced in both schools). Clinically, Dr. Wright works in the Children’s Hospital, Boston- Pediatric Environmental Health Subspecialty Unit (PEHSU), specializing in evaluating children with health problems of suspected environmental origin. PEHSUs are a series of clinics established by the US Agency for Toxic Substances and Disease Registry (ATSDR) organized by the Association of Occupational and Environmental Clinics. His research expertise is in the field of gene-environment interaction in neurodevelopment and the role of psychosocial factors as modifiers of metal toxicity. He has published over 80 papers, most of which deal with Environmental Health issues and served on numerous national committee/advisory boards in the field of Pediatric Environmental Health, including the Agency for Toxic Substances and Disease Registry, the Academic Pediatric Association, National Research Council and the National Institutes of Health. Dr. Wright directs the Metals Research Core at HSPH, and its environmental chemistry laboratory. He is the Research Director of the Region 1, Pediatric Environmental Health Subspecialty Unit and member of the American Academy of Pediatrics Committee on Environmental Health.